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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,412	12/06/2001	Scott Williams	31844.0200	6467

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EXAMINER

NGUYEN, VINH P

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/017,412

Applicant(s)

WILLIAMS ET AL.

Examiner

VINH P NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2,4-5,8 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Subramanian (Pat # 5,382,898).

As to claims 1 and 16-20, Subramanian discloses a probe card having a head plate (12) with an opening (15), a beam assembly (20,28,35) mounted across the opening of the head plate (20,28,35) and a plurality of probe needles (30,31) extending through the beam assembly .

As to claim 2, it appears that the beam assembly has a support beam (20,22) mounted to the head plate (12) and a probe guide (35) mounted to the support beam (20,22).

As to claim 4, it appears that the holes in which the probe needles passing through are ore drilled.

As to claims 5 and 8, it appears that the probe needles are cantilever needles.

4. Claims 1-2,5,8,10-11,15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Grangroth et al (Pat # 4,649,339).

As to claims 1-2,5,8,10,14,16-20, Grangroth et al disclose an apparatus as shown in figure

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2 having a sub-structure ((38), a head plate (54,60,62,66) mounted to the sub-structure, a beam assembly (10) and a plurality of probe needles (~~18~~¹²) extending through the beam assembly (10).

As to claim 11, it appears that the beam assembly includes a support beam (10) with guides (vias).

As to claim 15, it appears that the device of Grangroth et al also has an interface assembly ((46,44) and an automatic test equipment (20) for receiving and analyzing electrical signals from the probe card assembly.

5. Claims 1,7 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasegawa (Pat # 4,649,339).

As to claims 1,7,16-20, Hasegawa disclose an apparatus as shown in figures 1-2 having a head plate (22) with an opening, a plurality of beam assemblies (26) mounted to the head plate (22) and plurality of probe needles ((30) extending through the beam assemblies(26).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3,6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subramanian (Pat # 5,382,898).

As to claim 3, the material for the support beam such as "steel" would have been considered as an obvious design choice since the selection of the material would depend on its availability and cost.

As to claim 6, it appears that the dimension for the probe needle pitch of less than approximately 100 micron would have been obvious design choice since this dimension would depend on the size of the test point on a device under test.

As to claim 9, it appears that the number of probe needles would have been considered as an obvious design choice since it depends on number of test points to be tested.

8. Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Grangroth et al (Pat # 4,649,339).

As to claim 12, it would have been obvious for one of ordinary skill in the art to have the sub-structure (38) made of printed circuit board since the type of the sub-structure does not effect on the test results.

9. Claims 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 12, it is unclear what "printed circuit board" represents.

In claim 13, it appears that the limitation of "the first end extends through the beam

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assembly for contacting the printed circuit board” appears to be inaccurate.

10. Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It appears that the specification does not have sufficient support for the limitation of “the first end extends through the beam assembly for contacting the printed circuit board” as recited in claim 13.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH P. NGUYEN whose telephone number is (703) 305-4914.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900.


VINH P. NGUYEN
PRIMARY EXAMINER
ART UNIT 2829
04/10/03